

**Article ##:** To see if the Town will vote to amend the Zoning Bylaw to regulate the installation of large-scale solar photovoltaic installations, as follows:

Zoning Amendment #1: Add the following definitions to Section 205-4 of the Zoning Bylaw (Definitions):

**Large-Scale Solar Photovoltaic Installation:** A solar photovoltaic system that has a minimum nameplate capacity of 250 kW DC. Such installations may be either ground-mounted or installed upon a rooftop.

**Residential-Scale Solar Photovoltaic Installation:** A solar photovoltaic system that has a maximum nameplate capacity of 25 kW DC. Such installations may be either ground-mounted or installed upon a rooftop.

**Solar Photovoltaic Installation:** An active solar energy collection device that converts solar energy directly into electricity whose primary purpose is to harvest energy by transforming solar energy into another form of energy or transferring heat from a collector to another medium using mechanical, electrical, or chemical means.

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Zoning Amendment #2:

Add a new Section 205-40.1 to regulate large-scale solar facilities, as follows:

**§ 205-40.1 Large-Scale Solar Photovoltaic Installations.**

A. Purpose.

The purpose of this section is to facilitate the creation of new large-scale solar photovoltaic installations by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such installations that address public safety, minimize impacts on environmental, scenic, natural and historic resources, and to provide adequate financial assurance for the eventual decommissioning of such installations.

B. Applicability.

Subject to the requirements below, large-scale ground-mounted solar photovoltaic installations are permitted by Special Permit in the residential zoning districts (R-I, R-II & R-III) and commercial zoning districts (C-I & C-II) and upon Site Plan Approval from the Planning Board. For this use, the Planning Board shall be the Special Permit Granting Authority (SPGA). Large-scale ground-mounted solar photovoltaic installations are not allowed in the industrial zoning districts (I-I & I-II) or in the village center zoning district (VC). Further, such installations shall not be allowed on:

- (1) Properties that are currently undergoing active remediation for hazardous waste contamination. Formerly contaminated sites that have obtained "Permanent Solution" status from the MA Department of Environmental Protection may be considered suitable for ground-mounted large-scale solar installations depending upon the stipulations attached to said status.

- (2) Properties where in order to construct the large-scale ground-mounted solar facility, it will be necessary to disturb an amount of land (either earth removal or placement of fill) that will trigger the need to obtain an Earth Removal and/or Placement of Fill Permit under the Town's Earth Removal & Placement of Fill Bylaw (Chapter 97, Article 3).

Large-scale roof-mounted solar photovoltaic installations are allowed by right in all zoning districts upon Site Plan Approval from the Planning Board, and upon receipt of a report by a qualified structural engineer that documents the roof is capable of supporting the solar array.

Residential-Scale solar photovoltaic installations are allowed by right in all zoning districts upon obtaining a Building Permit from the Building Commissioner.

C. Special Permit Criteria:

The SPGA must make all of the following Findings in order to grant a Special Permit for a large-scale ground mounted solar installation:

- (1) The proposed use is appropriate on the site in question.
- (2) The proposed use will not be unduly detrimental to the health, safety or welfare of the community or neighborhood by reason of noise, traffic, pollution, visual impact, or demand on community services.

D. Reasonable Conditions:

The SPGA may impose any conditions upon its granting of a Special Permit deemed necessary to achieve the purpose of this bylaw, such as, but not limited to, the following:

- (1) Greater than minimum setback requirements;
- (2) Modification of exterior appearance;
- (3) Limitation of size or extent of facilities;
- (4) Regulation of traffic and site plan features;
- (5) Screening of premises from view by use of appropriate walls, fencing or buffer strips;
- (6) Limitation of sound levels;
- (7) Additional design and siting modifications where appropriate.

E. Utility Notification.

When submitting a Site Plan to the Planning Board for a large-scale solar installation, the applicant shall submit evidence at the time of the application that the utility company operating the electrical grid where the installation is to be located has been informed of the applicant's intent to construct a solar photovoltaic installation and that approval to connect to the grid has been granted or appropriate application(s) have or will be made to such utilities for interconnection.

F. Buffers and Setbacks.

- (1) Buffer strips. All large-scale ground-mounted installations shall be surrounded by a buffer strip which shall be one hundred (100) feet from all abutting properties zoned for residential use. For large-scale ground-mounted solar installations that abut Commercial and/or Industrial zoning districts, this setback shall be reduced to fifty (50) feet. Buffer strips shall not be disturbed and left in their natural state. The Planning Board may

require the Applicant to plant additional vegetation within the buffer strips to better screen the use from abutters.

- (2) Setbacks. All large-scale ground-mounted installations (including all panels, inverters, transformers and all other associated equipment) shall be set back a minimum of fifty (50) feet from all lot lines (front, rear and sides). The setbacks shall be measured from the lot lines to the fence enclosing the solar array.
- (3) Lot Coverage Limitation: Large-scale ground-mounted installations shall not cover more than fifty (50%) percent of the lot on which it is situated. Lot coverage includes the land covered by solar panels and all associated equipment.

G. Design Standards.

- (1) Lighting and Security.

Lighting of solar photovoltaic installations shall be consistent with local, state and federal law. Lighting of other parts of the installation, such as any appurtenant structures, shall be limited to that required for safety and operational purposes and shall be reasonably shielded from abutting properties. Where feasible, any required lighting shall be directed downward and shall incorporate full cutoff fixtures to reduce light pollution. Surveillance and security cameras shall be shielded from viewing abutting private property or invading the privacy of any abutting residential property owner.

- (2) Signage.

All signs shall comply with the Zoning Bylaw and shall not be used for displaying any advertising except to identify the owner and/or operator of the solar installation and a twenty-four-hour emergency contact telephone number.

- (3) Land Clearing.

Clearing of natural vegetation shall be limited to what is necessary for construction, operation and maintenance of the installation. Any land disturbance shall be subject to stormwater management criteria and by applicable laws, regulations and bylaws.

- (4) Visual Impact.

Any large -scale ground-mounted solar photovoltaic installation shall be designed to minimize visual impacts, including preserving natural vegetation to the maximum extent possible, blending in equipment with the surroundings, and adding vegetative buffers to screen abutting residential properties whether developed or not. Siting shall be such that the view of the solar electric generating installation from other areas of Town shall be as minimal as possible. Buffer strips shall surround the proposed project. A screening plan, that assures the facility is shielded to the greatest extent possible from public view, shall be required to be reviewed under the site plan review.

- (5) Access Roads.

All access roads and interior roads shall be constructed to minimize grading, removal of stone wall or trees, and to minimize impacts to environmental or historic resources.

(6) Hazardous Materials.

Hazardous materials that are stored, used or generated on site shall not exceed the amount for a "Very Small Quantity Generator of Hazardous Waste" as defined by the Department of Environmental Protection (DEP) pursuant to 310 CMR 30.000. Any applications of herbicides or pesticides shall be conducted in accordance with the MA Department of Agriculture Regulations.

H. Additional Site Plan Requirements.

In addition to the provisions set forth above, Special Permit applicants for large-scale ground-mounted solar projects shall comply with all provisions of the Planning Board's Site Plan Approval Regulations, unless specifically waived by the Planning Board.

I. Discontinuance and Removal.

**Removal Requirements:** Any large-scale solar photovoltaic installation, or any substantial part thereof, not used for a period of one continuous year or more without written permission from the SPGA, or that has reached the end of its useful life, shall be considered discontinued, and shall be removed. Upon written request from the Zoning Enforcement Officer addressed to the contact address provided and maintained by the owner or operator as part of the Special Permit application, the owner or operator shall provide evidence to the Zoning Enforcement Officer demonstrating continued use of the solar facility. Failure to provide such evidence within thirty days of such written request shall be conclusive evidence that the installation has been discontinued. Anyone intending to decommission and/or remove such an installation shall notify the SPGA and Zoning Enforcement Officer by certified mail of the proposed date of discontinued operations and plans for removal.

The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. Removal shall consist of:

- (a) Physical removal of all parts of and appurtenances to the solar photovoltaic installation, including structures, equipment, security barriers and transmission lines from the site.
- (b) Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
- (c) Stabilization or re-vegetation of the site as necessary to minimize erosion. The Planning Board may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.
- (d) Gravel or ground cover consistent with landscape.

If the owner or operator of the solar photovoltaic installation fails to remove the installation in accordance with the requirements of this section, the town shall have the right, to the extent it is authorized by law, to enter the property and remove the installation at the expense of the owner of the installation and the owner(s) of the site on which the facility is located.

J. Financial Surety.

Proponents seeking to construct and operate a large-scale ground-mounted solar photovoltaic installation shall provide, prior to construction, surety in form and amount satisfactory to the SPGA, which may be an escrow account, bond or otherwise, to cover the cost of removal in the event the town must remove the solar array and remediate the landscape. Such surety will not be required for municipally- or state-owned facilities. The project proponent shall submit a fully inclusive estimate of the costs associated with removal (minus salvage value), prepared by a qualified engineer. The amount shall include a mechanism for calculating increased removal costs due to inflation. The SPGA may require that the amount of surety be increased as required during the life of the installation.

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Zoning Amendment #3:

Add "Large-Scale Ground-Mounted Solar Photovoltaic Installations", "Large-Scale Roof-Mounted Solar Photovoltaic Installations" and "Residential-Scale Solar Photovoltaic Installations" as new Items 10, 11 & 12 under Section H (Other Principal Uses) within the Table of Use Regulations.

	R-1	R-2	R-III	C-I	C-II	VC	I-I	I-II
(10) Large-Scale Ground-Mounted Solar Photovoltaic Installations (See Section 205.40.1)	SP	SP	SP	SP	SP	N	SP	SP
(11) Large-Scale Roof-Mounted Solar Photovoltaic Installations	Y	Y	Y	Y	Y	Y	Y	Y
(12) Residential-Scale Solar Photovoltaic Installations	Y	Y	Y	Y	Y	Y	Y	Y